

*Title of the workshop: Instabilities, Bifurcations and Waves in Solid Mechanics*

**Workshop in honor of Alain Léger**

**Date: 22<sup>nd</sup> of June 2017**

*Speakers:*

**Patrick BALLARD**      *Institut Jean le Rond d'Alembert (Paris, UPMC)*

"Asymptotic analysis of thin-walled beams" ("Analyse asymptotique des poutres en voile mince ")

**Alain BOSSAVIT**      *LGEF (Paris, Supélec)*

"Sur le calcul des forces en magnétoélasticité"

**Tim HEALEY**      *Cornell University (USA)*

"Global symmetry-breaking solutions in a model for two-phase lipid-bilayer vesicles"

**Gérard IOOSS**      *Laboratoire J.A. Dieudonné (UNSA)*

"Quasipatterns in Bénard - Rayleigh convection"

**Christian LICHT**      *Laboratoire de Mécanique et Génie Civil (Montpellier)/Dept. of Mathematics,  
Mahidol University (Bangkok, Thailand)*

"Approximation de semi-groupes au sens de Trotter et modélisation mathématique asymptotique en Physique"

**Mike LOWE**      *Imperial College (UK)*

"Simulation of elastic wave propagation in polycrystalline materials"

This workshop intends covering different aspects of instabilities and wave propagation in Solid Mechanics. It shall thus be the opportunity to honor our colleague Alain Léger, specialist in the field, whose numerous contributions extend over many years since the beginning of his career at EdF and during this last decade at the LMA.

The workshop focuses on two subjects, on the one hand 'complexity' who specifically finds its expression in nonlinearity and coupling between different physical phenomena, and on the other hand 'instability' when stability is essential to ensure safety. Inherent to the question is the proper formulation of the equations of solid mechanics. These aspects shall be dealt with by specialists in wave propagation and in bifurcations. A particularly difficult aspect is the highly nonlinear dynamical behavior of solids in presence of unilateral contact and dry friction. Such problems are often encountered when forming materials and are studied by a handful of specialists.

*Practical information:*

The workshop shall take place in the new premises of the LMA (see [lien](#) for access), registration is free but mandatory. Lunch shall be served to all registered participants.

To register send an email to [pratt@lma.cnrs-mrs.fr](mailto:pratt@lma.cnrs-mrs.fr) under subject "workshop 22<sup>nd</sup> June".